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**ENGINEERING AND PROCESSES CHANGE MANAGEMENT**  
**(Requiring Approval for Class I and Class II Changes)**

**REVISION HISTORY**

- Revision 5 replaces revision 4 dated 04/09/18.
  - Added “Requiring Approval...” to title of Q-Note.
  - Removed “Engineering” and “Process” from the change classifications definitions and examples.
  - Changes are now categorized as: Class I (Major), Class II (Minor), or Class III (Editorial)
  - Divided process change section into Class I and Class II change sections.
  - Added statement regarding COTS items.
  - In the “Submitting the Change” section, separated the initial statement to include that the Seller designate the type of change being submitted as either process or engineering, and instructed the Seller to contact the Subcontract Manager with any questions.
- Minor formatting, clarifying, and grammatical corrections.
- The applicable revision of this document is determined by:
  - The revision specified on the purchase order, or
  - The revision in effect at the time of the purchase order if no revision is listed on the purchase order.

**REQUIREMENTS**

1. Seller shall establish baselines:
  - 1.1. Engineering documentation (such as drawings and Seller sub-assembly level, Bill of Materials and specifications) and process documentation (such as work and test instructions) baselines shall be established and frozen as a result of part qualification or software Formal Qualification Test (FQT).
  - 1.2. For hardware that does not have requirements for environmental qualification, the completed First Article Inspection (FAI) shall form the baseline.
2. Once engineering and process baselines have been established the seller shall control changes to both the engineering and process baselines. The seller is not authorized to build hardware “at their risk” by incorporating proposed engineering and/or implementing process or tooling change(s) prior to receiving Buyer Subcontract Manager approval as defined in this document.
3. This Q-Note does not apply to Commercial-Off-The-Shelf (COTS) component(s) within the item(s) on this purchase order, however, a change to a new COTS part number that is not included in the baseline TDP shall be considered a change. In the case of COTS components with Buyer modifications, the modifications are subject to the controls in this Q-Note.
4. The Seller shall assign one of the following classifications for each proposed change:
  - Major/Minor Changes
    - Class I (Major)

- Class II (Minor)
- Editorial Changes
  - Class III Editorial Change
- 4.1. Class I (Major) Changes
  - 4.1.1. Class I (Major) Changes. The following definition of Class I change classification is modeled after EIA-649 Table 4, titled “Typical Major Change Criteria.” Class I (Major) Change Criteria:
    - A change that affects specified and approved requirements for product attributes, including safety, reliability, and supportability.
    - A change, after establishment of the baseline for the product design or implementation of the product design, that affects compatibility with interfacing products, including such products as test equipment, support equipment and associated software, programmable logic devices and/or firmware and products furnished by a customer or that affects one or more of the following:
      - Delivered operation or servicing instructions
      - Required calibration to the extent that product identification should be changed
      - Interchangeability or substitutability of replaceable products, assemblies, or components
      - Change to add a previously non-qualified Seller, where Seller selection is specified
      - User skills or user physical attributes. For example, the proposed change requires the customer to impose a height or strength requirement to operate the product
      - Operator or maintenance training. For example, the proposed change requires the customer to change how they train the Operator to use the product, or requires the customer to change how they maintain the product
      - Changes which requires retrofit of delivered products; e.g., by product recall, modification kit installation, attrition, replacement during maintenance using modified spares
    - Any change in the manufacturing process (routers, work instructions, procedures etc.) that changes or alters the configuration, composition, or physical properties of the item produced
    - Changes to material, including chemical or physical properties, from which the product is manufactured
    - Adding any material to the deliverable item that is not called out in the manufacturing or engineering documentation
    - Changes to Acceptance Test Procedure(s)
    - Changing the functional capabilities and purpose of test equipment
    - Any change to characteristics noted on the drawing or STAMP package on this purchase order

- Class I change in the Seller sub-tier supplier's process, tooling or engineering
- Changing the source of a material, sub-component or out-sourced operation
- A change that does not impact the above criteria and would otherwise be classified as minor, but does result in an increase in cost/price to Buyer, including incentives and fees, guarantees, warranties, and contracted deliveries or milestones. Routine service or maintenance does not require submission of a change notice request.

#### 4.2. Class II (Minor) Changes

4.2.1. Any change that is not a major change as defined above. Any Class II change will be determined to be Class I if it affects the form, fit, or function of the end item(s) specified on the PO. The following are **examples** of changes that are Class II Minor changes:

- Adding a new Seller sub-tier supplier to produce a part
- Changing the location of the internal or external site where some or all of the work is being performed, including movement of the production line equipment
- Using different types of tools to produce the item on this purchase order (this does not include consumable tooling)
- Changing to new or alternate production line machines or equipment
- Changing from one COTS part number to another COTS part number if the new part number is not included as an allowable alternate to the baseline TDP
- Class II change in the Seller sub-tier supplier's process, tooling or engineering
- Changing the Sequence of an operation, method of an operation, adding or deleting an operation (minor only if applied to baseline changes)
- Changes in any machine programming (examples: CMM, NC machine, OI programming).
- Changes to qualified inspection techniques or equipment (as opposed to calibrated TE): reduction, change in technique, etc.
- Changing attributes of the test equipment that does not affect the functional capabilities and purpose of test equipment

#### 4.3. Class III (Editorial) Changes

4.3.1. Class III Editorial changes have no effect on the hardware (records only). An editorial change is considered a correction to spelling; correcting typographical errors, adding or deleting photos; and/or correcting grammatical errors.

#### 5. Submitting the Change

5.1. If the Seller has access to the Buyer Product Data Management (PDM) system, the required approval/notification documents shall be submitted to PDM. If the

Seller does not have access to the Buyer PDM system, the Seller shall submit the required approval/notification documents to the Buyer Subcontract Manager.

- 5.2. The seller is authorized to use/submit their own change notice request form, however, information included in seller's form shall correspond exactly with Buyer Change Proposal forms (located on the Q-Note web site under supporting documents; 22547RMS is for Class I changes and 22548RMS is for Class II changes). For Class I and II changes the seller shall specify whether the change is an engineering or a process change. If the seller has any question(s) about the class or subtype (process vs engineering) of change being submitted they are advised to contact the Subcontract Manager for clarification prior to the submittal of the change request.
- 5.3. Requirements for the change submittal are as follows:
  - **All Class I (Major) and Class II (Minor) changes require Buyer Subcontract Manager approval prior to implementation.**
  - All Class III Editorial changes require Buyer notification within one month after implementation.
  - Buyer STAMP/PO revision changes require notification prior to implementation.
  - Class III changes shall contain at a minimum the following:
    - A brief statement/purpose of the identified change(s)
    - Part number
    - Document name or identifier
    - Before and after revision levels of affected documents listing the document page number and paragraph where the change was implemented
- 5.4. The Seller shall submit each change separately to the Buyer Subcontract Manager.

**DATA SUBMISSION SUMMARY**

- Seller to deliver the following data to Buyer for Buyer Approval:
  - All Engineering and Process changes as specified in this document.
- Seller to deliver the following data to Buyer for information as required by this document:
- Editorial changes require notification within one month after implementing change.

**NOTES**

- Exceptions to this document are not allowed unless contractually authorized.
- After the establishment of the baseline, Buyer may conduct monitoring activities to verify the Seller meets the configuration management requirements. These activities include but are not limited to conducting data reviews; conducting design review; conducting Production Readiness Review (PRR); performing configuration audits; performing a Buyer Product and Process Verification (PPV); performing a Hardware Acceptance Review (HAR) and/or Source Inspection.

- Buyer reserves the right to request any documentation associated with engineering or process change requests submitted for approval or concurrence.